Information Bulletin

Safety Basis Guidance Documentation

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Summary: DOE Technical Standards and Industry Standards may provide requirements for establishing limits, but do not always describe how those limits should be derived. When an operating limit is determined, the process for deriving the limit should be transparent to all involved personnel.

Discussion of Activities: The U.S. Department of Energy (DOE) Office of Independent Oversight conducted an inspection of environment, safety, and health (ES&H) programs at the DOE Hanford Site Waste Stabilization and Disposition Project (WSD).

During the inspection some deficiencies within the documented safety analyses for fire suppression systems and building ventilation systems were noted. The primary deficiency in both cases was that the safety bases for the facilities (including the MDSA, the TSRs, and the FHA) and the supporting analyses were not consistent, and adequate to demonstrate that the safety-significant ventilation and fire suppression systems will perform their intended safety functions.

Analysis: DOE G 423.1-1, *Implementation Guide for Use in Developing Technical Safety Requirements*, does not provide technical or industry standards for development of Technical Safety Requirements (TSR) technical bases. In these cases, local supplemental guidance was not developed which would provide additional requirements and clarification for the developers of TSR basis documentation. Without the background analysis documents there was not any objective criteria by which the review of the safety analysis could be adequately performed. Without ready access, reviewers were not able to identify the discrepancies.

Recommended Actions: Develop additional guidance to supplement DOE G 423.1-1, *Implementation Guide for Use in Developing Technical Safety Requirements*, for the development and review of controls and applicable standards. The guidance should establish objective criteria for evaluating the development process of technical safety requirements.

Cost Savings/Avoidance: Not Evaluated

Work Function: Nuclear Safety

Hazards: NA

ISM Core Functions: Develop/Implement Controls

Keywords: Analysis, Documentation

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References: EM-RL—PHMC-SWOC-2006-0003, EM-RL—PHMC-PFP-2006-032